

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 2 (after the title), as follows:

BACKGROUND OF THE INVENTION

The invention relates to a take-up device for web-shaped materials, especially plastic films with a take-up roller and a contact roller which presses the web-shaped material against the take-up roller ~~as claimed in the preamble of claim 1.~~

Please amend the paragraph beginning at page 1, line 5, as follows:

Especially in the manufacture of plastic films, the plastic film webs which are stretched in a stretching system in the transverse and lengthwise direction are ultimately wound onto a take-up roller. A contact roller which presses the film layer which is outermost at the time against the rolled bale which has been wound so far is in compressive contact with the take-up roller or the rolled bale.

Please amend the paragraph beginning at page 1, line 10, as follows:

The known contact rollers are conventionally supported on the two roller ends. According to the working width, the required contact compressive forces and the necessary operating rpm, the diameter of the contact roller is chosen such that the desired stiffness is obtained and sagging is prevented as much as possible. At working widths from 8 to 10 m the diameter of conventional contact rollers is often more than 600 mm.

Page 2, between lines 12 and 13, insert the following heading:

SUMMARY OF THE INVENTION

Please delete the paragraph beginning at page 2, line 15, which starts with "This object is achieved..."

Please amend the paragraph beginning at page 2, line 17, as follows:

In the take-up device ~~as claimed in~~of the invention there is at least one bearing unit which acts between the ends of the contact roller on its peripheral compressive surface and supports the contact roller, this bearing unit being adjustable in at least two directions which run perpendicular to one another. Furthermore the contact roller is made flexurally soft such that by moving at least one bearing unit the bending line of the contact roller can be influenced in a purposeful manner. The diameter of the contact roller is preferably a maximum 550 mm, especially a maximum 400 mm when its working width is more than 8 m; a maximum 400 mm, especially a maximum 300 mm, when its working width is between 3 and 8 m; and a maximum 200 mm when its working width is less than 3 m.

Please amend the paragraph beginning at page 3, line 3, as follows:

In contrast to known contact rollers which are made as stiff as possible for large working widths and therefore with large diameters, the contact roller ~~as claimed in~~of the invention is made relatively flexurally soft and has a small diameter. This is enabled by the additional bearing units which act between the ends of the contact roller on its peripheral compressive surface, and they therefore support these points. Feasibly there are several of these bearing units. As a result of the flexurally soft execution of the contact roller, its bending line can be influenced over its entire working width such that there is an optimum uniform pressure distribution over the working width of the contact roller, and thus along the entire working width, a defined contact pressure is applied to the take-up roller or the rolled bale. In particular, with respect to the width preservation effect, the bending line of the contact roller can be influenced in a purposeful manner such that the tensile stress on the material web is uniform in the edge areas and in the middle area, by which a high quality of the rolled bale and uniform hardness of the rolled bale over the entire bale width can be

achieved. As a result of the smaller diameter and lower weight of the contact roller, it has improved dynamic behavior so that it is especially suited even for high take-up speeds. The load on the bearings is reduced. Furthermore, the reduced roller diameter yields a smaller Hertzian contact surface between the contact roller and the rolled bale so that high contact pressures can be achieved even with lower forces. The additional bearing units between the roller ends make it possible to obtain data for measuring the rolled bale quality and for adaptive damping. Thus it is possible to detect vibrations, especially also due to the natural resonance of the contact roller, and to adapt the damping accordingly. Furthermore, adaptive damping over the entire working width and not only on the roller ends is possible. The number of bearing units between the roller ends also enables improved damping of the contact roller in the middle area. The additional support of the contact roller in the roller middle furthermore causes improved concentricity in the roller middle and a considerable rise of the critical rpm. The load on the contact roller bearing due to rough running is greatly reduced.

Please amend the paragraph beginning at page 4, line 20, as follows:

Based on the aforementioned possible embodiments and advantages, the contact roller as ~~claimed~~ in the invention is thus especially suitable for large working widths which can be for example 10 m and more, and for high take-up speeds.

Page 7, between lines 7 and 8, insert the following heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend the paragraph beginning at page 7, line 9, as follows:

Figure 1 shows a perspective, partially cutaway view of the winding device ~~as claimed in~~ of the invention,

Please amend the paragraph beginning at page 7, line 15, as follows:

Figure 5 shows another embodiment of the take-up device ~~as claimed in~~of the invention.

Page 7, between lines 15 and 16, insert the following heading:

DETAILED DESCRIPTION OF THE INVENTION

Page 12, between lines 15 and 16, insert the following heading:

Figure 5 shows a segment of another embodiment of the take-up device ~~as claimed in~~of the invention. In this embodiment the upper bearing leg 7a of the vertical bearing segment 7 is pivotally mounted on the retaining arm 9 of the vertical bearing segment 7. The swivelling axis runs parallel to the axis of the contact roller 4 and is labelled 34. The bearing leg 7a can thus be folded up around the swivelling axis 34 if in case of a fault the material web has been pulled into the upper bearing gap and must be removed from this gap. In the horizontal operating position the bearing leg 7a is fixed by screws 35 which are screwed from overhead through the bearing leg 7a into the retaining arm 9 in the area of the projection 36. Between the head of the screw 35 and the bearing leg 7a there is a spring 36, by which the bearing leg 7a is pressed down elastically. If the material web is drawn in or the material web is taken up on the contact roller 4, the upper bearing leg 7a can yield elastically up in this way.

AMENDMENTS TO THE CLAIMS:

Please cancel claim 5 without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~Take-up~~A take-up device for web-shaped materials, ~~especially plastic films, with comprising:~~
a take-up roller ~~(1)~~ and;
a contact roller ~~(1)~~ which presses the web-shaped material ~~(2)~~ against the take-up roller ~~(1)~~ by means of a peripheral compressive surface, ~~characterized by the following features:~~ and
~~there is~~ at least one bearing unit ~~(5)~~ which acts between the ends of the contact roller ~~(4)~~ on its peripheral compressive surface and supports the contact roller ~~(4)~~,
wherein said at least one bearing unit ~~(5)~~ is adjustable in at least two directions which run perpendicular to one another, and wherein the contact roller ~~(4)~~ is ~~made flexurally soft~~ flexibly supported such that ~~by moving said~~ at least one bearing unit ~~(5)~~ the causes a bending line of the contact roller ~~(4)~~ can be influenced in a purposeful manner to adjust with respect to the web-shaped material.
2. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein the diameter of the contact roller ~~(4)~~ is:
a maximum 550 mm, ~~especially a maximum 400 mm~~ when its working width is more than 8 m,
a maximum 400 mm, ~~especially a maximum 300 mm~~, when its working width is between 3 and 8 m, and
a maximum 200 mm when its working width is less than 3 m.

3. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1-, ~~wherein~~
~~there are~~further comprising:

sensor means ~~(27, 28, 30)~~ which detect at least one of the position, path, force ~~and/or~~and
acceleration of the contact roller ~~(4)~~ via the at least one bearing unit(s) (5) unit, and ~~wherein there~~
~~is a~~

control means which controls the adjustment of the at least one bearing unit(s) (5) unit and
thus the setting of at least one of the bending line ~~and/or~~and damping of the contact roller ~~(4)~~
depending on the data acquired by the sensor means ~~(27, 28, 30)~~.

4. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein
along the contact roller ~~(4)~~ there are a plurality of bearing units ~~(5)~~⁶ which are adjustable
independently of one another in different directions.

5. (Canceled)

6. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein the
at least one bearing unit ~~(5) consists of~~is an air or magnetic bearing.

7. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein the
at least one bearing unit (5) comprises a vertical bearing segment ~~(7)~~ which vertically supports
the contact roller ~~(4)~~ and a horizontal bearing segment ~~(8)~~ which horizontally supports the
contact roller ~~(4)~~ and which is movably guided in or on the vertical bearing segment ~~(7)~~.

8. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 7, wherein the
vertical bearing segment ~~(7)~~ and the horizontal bearing segment ~~(8)~~ are interdigitally internested.

9. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 7-, ~~wherein~~
~~there is~~further comprising a base support ~~(6)~~ which is located parallel to the contact roller ~~(4)~~ and

~~in or on which,~~ wherein the vertical bearing segment (7) ~~can move~~ is supported by the base support so as to be vertically movable and is supported floating in the horizontal direction.

10. (Currently Amended) ~~Take-up~~ The take-up device as claimed in claim 7, wherein the vertical bearing segment (7) has two bearing legs (7a, 7b) which support the contact roller (4) from opposing sides and between which the horizontal bearing segment (8) can be moved.

11. (Currently Amended) ~~Take-up~~ The take-up device as claimed in claim 10, wherein each bearing leg (7a, 7b) has two spaced bearing fingers (11) between which the horizontal bearing segment (8) can be moved.

12. (Currently Amended) ~~Take-up~~ The take-up device as claimed in claim 9, wherein within the base support (6) there is an intermediate support (14) for the vertical bearing segment (7) with a vertical movement capacity, in which the vertical bearing segment (7) is fixed vertically and is supported to float horizontally, and wherein between the base support (6) and the intermediate support (14) a vertical actuator (18) is active in order to keep the intermediate support (14) in a certain vertical position.

13. (Currently Amended) ~~Take-up~~ The take-up device as claimed in claim 7, wherein the horizontal bearing segment (8) is ~~made piston-like~~ reciprocally movable and can be adjusted in the direction of the contact roller (4) by a horizontal actuator (20) which acts between the base support (6) and the horizontal bearing segment (8).

14. (Currently Amended) ~~Take-up~~ The take-up device as claimed in claim 7, wherein between the vertical bearing segment (7) and the base support (6) there are sensor means (27, 28) for detecting at least one of the bearing forces, position ~~and/or~~ and vibrations of the vertical bearing segment (7).

15. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 7, wherein between the horizontal bearing segment (8) and the base support (6) there are sensor means (30) for detecting at least one of the bearing forces, position ~~and/or~~and vibrations of the horizontal bearing segment (8).

16. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein the at least one bearing unit (5) is adjustable in ~~the~~an axial direction of the contact roller (4).

17. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein in ~~the~~a middle area of the contact roller (4) there are more bearing units (5) than toward the ends of the contact roller (4).

18. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 10, wherein at least one bearing leg (7a) is located to be able to swivel on ~~the~~a retaining arm (9) of the vertical bearing segment (7).

19. (Currently Amended) ~~Take-up~~The take-up device as claimed in claim 1, wherein the contact roller (4) is supported at several positions over the working width by bearing units in the form of short rubber rollers.

20. (New) The take-up device as claimed in claim 1, wherein the diameter of the contact roller is:

a maximum of 400 mm when its working width is more than 8 m,

a maximum of 300 mm when its working width is between 3 m and 8 m, and

a maximum of 200 mm when its working width is less than 3 m.